Claims

1. A filter assembly for medical and laboratory use comprising a housing, the housing comprising:

a cover comprising an inlet;

a bottom part comprising an outlet; and

a plurality of spring levers distributed around the circumference of the cover, the spring levers comprising hook-shaped projections, the hook-shaped projections connectable with the bottom part, wherein the filter assembly is adapted to clamp a filter membrane between the cover and the bottom part in a fluid-tight manner.

2. A filter assembly according to claim 1, wherein the bottom part comprises a bottom rim, and wherein the hook-shaped projections overlap the bottom rim of the bottom part to releasably attach thereto, and wherein the spring levers rotate on pivot points, and wherein the spring levers comprise upwardly projecting actuation flaps.

3. A filter assembly according to claim 2, wherein the spring levers and the cover are formed unitarily of plastic, and wherein the spring levers are molded onto flaps laterally projecting from the cover, which flaps form the pivot points of the spring levers.

4. A filter assembly according to claim 3, wherein the plurality of spring levers comprises three spring levers distributed equidistantly around the circumference of the cover.

5. A filter assembly according to claim 4, further comprising an annular seal between the cover and the bottom part, wherein the cover comprises an annular channel and a free annular space, and wherein the bottom part comprises an annular projection engaging the free annular space, wherein the annular seal is disposed in the annular channel.

6. A filter assembly according to claim 5, wherein a disk-shaped supporting body for the filter membrane is disposed in a recess of the bottom part, and wherein the recess comprises supporting ribs surrounding the outlet.

7. A filter assembly according to claim 6, wherein the supporting body comprises a porous material.

8. A filter assembly according to claim 7, wherein the filter membrane comprises a lateral tongue extending from the closed housing.

9. A filter assembly according to claim 8, wherein the bottom part comprises an annular channel defined in part by an exterior wall and a bottom, which exterior wall is overlapped by the hook-shaped projections and wherein the bottom of the annular channel is positioned generally at a same height as a height of the bottom of the recess.

10. A filter assembly according to claim 9, wherein the cover and the bottom part each comprises a recess for the passage of the tongue of the filter membrane.

11. A filter assembly according to claim 5, wherein the filter membrane comprises a lateral tongue extending from the closed housing.

12. A filter assembly according to claim 11, wherein the bottom part comprises an annular channel defined in part by an exterior wall and a bottom, which exterior wall is overlapped by the hook-shaped projections and wherein the bottom of the annular channel is positioned generally at a same height as a height of the bottom of the recess.

13. A filter assembly according to claim 12, wherein the cover and the bottom part each comprises a recess for the passage of the tongue of the filter membrane.

14. A filter assembly according to claim 5, wherein the bottom part comprises an annular channel defined in part by an exterior wall and a bottom, which exterior wall is overlapped by the hook-shaped projections and wherein the bottom of the annular channel is positioned generally at a same height as a height of the bottom of the recess.

15. A filter assembly according to claim 14, wherein the cover and the bottom part each comprises a recess for the passage of a tongue of the filter membrane.

16. A filter assembly according to claim 1, wherein the plurality of spring levers comprises three spring levers distributed equidistantly around the circumference of the cover.

17. A filter assembly according to claim 16, further comprising an annular seal between the cover and the bottom part, wherein the cover comprises an annular channel and a free annular space, and wherein the bottom part comprises an annular projection engaging the free annular space, wherein the annular seal is disposed in the annular channel.

18. A filter assembly according to claim 17, further comprising an annular projection such that with the housing closed a circumferential rim of the filter membrane is clamped between the annular seal and a contact surface of the bottom part, wherein a disk-shaped supporting body for the filter membrane is disposed in a recess of the bottom part, and wherein the recess comprises supporting ribs surrounding the outlet.

19. A filter assembly according to claim 18, wherein the supporting body comprises a porous material.

20. A filter assembly according to claim 19, wherein the filter membrane comprises a lateral tongue extending from the closed housing.

21. A filter assembly according to claim 20, wherein the bottom part comprises an annular channel defined in part by an exterior wall and a bottom, which exterior wall is overlapped by the hook-shaped projections and wherein the bottom of the annular channel is positioned generally at a same height as a height of the bottom of the recess.

22. A filter assembly according to claim 21, wherein the cover and the bottom part each comprises a recess for the passage of the tongue of the filter membrane.

23. A filter assembly according to claim 17, wherein the filter membrane comprises a lateral tongue extending from the closed housing.

24. A filter assembly according to claim 23, wherein the bottom part comprises an annular channel defined in part by an exterior wall and a bottom, which exterior wall is overlapped by the hook-shaped projections and wherein the bottom of the annular channel is positioned generally at a same height as a height of the bottom of the recess.

25. A filter assembly according to claim 24, wherein the cover and the bottom part each comprises a recess for the passage of the tongue of the filter membrane.

26. A filter assembly according to claim 17, wherein the bottom part comprises an annular channel defined in part by an exterior wall and a bottom, which exterior wall is overlapped by the hook-shaped projections and wherein the bottom of the annular channel is positioned generally at a same height as a height of the bottom of the recess.

27. A filter assembly according to claim 26, wherein the cover and the bottom part each comprises a recess for the passage of a tongue of the filter membrane.

28. A filter assembly according to claim 1, wherein the spring levers and the cover are formed unitarily of plastic, and wherein the spring levers are molded onto flaps laterally projecting from the cover, which flaps form the pivot points of the spring levers.

29. A filter assembly according to claim 28, wherein the plurality of spring levers comprises three spring levers distributed equidistantly around the circumference of the cover.

30. A filter assembly according to claim 29, further comprising an annular seal between the cover and the bottom part, wherein the cover comprises an annular channel and a free annular space, and wherein the bottom part comprises an annular projection engaging the free annular space, wherein the annular seal is disposed in the annular channel.

31. A filter assembly according to claim 30, further comprising an annular projection such that with the housing closed a circumferential rim of the filter membrane is clamped between the annular seal and a contact surface of the bottom part, wherein the bottom part includes a recess, and wherein the recess comprises supporting ribs surrounding the outlet.

32. A filter assembly according to claim 31, wherein the supporting body comprises a porous material.

33. A filter assembly according to claim 32, wherein the filter membrane comprises a lateral tongue extending from the closed housing.

34. A filter assembly according to claim 33, wherein the bottom part comprises an annular channel defined in part by an exterior wall and a bottom, which exterior wall is overlapped by the hook-shaped projections and wherein the bottom of the annular channel is positioned generally at a same height as a height of the bottom of the recess.

35. A filter assembly according to claim 34, wherein the cover and the bottom part each comprises a recess for the passage of the tongue of the filter membrane.

36. A filter assembly according to claim 1, further comprising an annular seal between the cover and the bottom part, wherein the cover comprises an annular channel and a free annular space, and wherein the bottom part comprises an annular projection engaging the free annular space, wherein the annular seal is disposed in the annular channel.

37. A filter assembly according to claim 36, wherein the filter membrane comprises a lateral tongue extending from the closed housing.

38. A filter assembly according to claim 37, wherein the bottom part comprises an annular channel defined in part by an exterior wall and a bottom, which exterior wall is overlapped by the hook-shaped projections and wherein the bottom of the annular channel is positioned generally at a same height as a height of the bottom of the recess.

39. A filter assembly according to claim 38, wherein the cover and the bottom part each comprises a recess for the passage of a tongue of the filter membrane.

40. A filter assembly according to claim 36, further comprising an annular projection such that with the housing closed a circumferential rim of the filter membrane is clamped between the annular seal and a contact surface of the bottom part, wherein the bottom part includes a recess, and wherein the recess comprises supporting ribs surrounding the outlet.

41. A filter assembly according to claim 40, wherein the supporting body comprises a porous material.

42. A filter assembly according to claim 41, wherein the filter membrane comprises a lateral tongue extending from the closed housing.

43. A filter assembly according to claim 42, wherein the bottom part comprises an annular channel defined in part by an exterior wall and a bottom, which exterior wall is overlapped by the hook-shaped projections and wherein the bottom of the annular channel is positioned generally at a same height as a height of the bottom of the recess.

44. A filter assembly according to claim 43, wherein the cover and the bottom part each comprises a recess for the passage of the tongue of the filter membrane.

45. A filter assembly according to claim 1, wherein the filter membrane comprises a lateral tongue extending from the closed housing.

46. A filter assembly according to claim 45, wherein the bottom part comprises an annular channel defined in part by an exterior wall and a bottom, which exterior wall is overlapped by the hook-shaped projections and wherein the bottom of the annular channel is positioned generally at a same height as a height of the bottom of the recess.

47. A filter assembly according to claim 46, wherein the cover and the bottom part each comprises a recess for the passage of the tongue of the filter membrane.

48. A filter assembly according to claim 1, wherein the bottom part comprises an annular channel defined in part by an exterior wall and a bottom, which exterior wall is overlapped by the hook-shaped projections and wherein the bottom of the annular channel is positioned generally at a same height as a height of the bottom of the recess.

49. A filter assembly according to claim 48, wherein the cover and the bottom part each comprises a recess for the passage of a tongue of the filter membrane.

50. A filter assembly for medical and laboratory use and adapted to receive a filter media sheet, the filter assembly comprising:

a cover comprising an inlet;

a bottom part comprising an outlet;

a means for supporting the filter media sheet; and

a plurality of spring levers distributed around the circumference of the cover, the spring levers comprising hook-shaped projections, the hook-shaped projections connectable with the bottom part, wherein the filter assembly is adapted to clamp a filter media sheet between the cover and the bottom part in a fluid-tight manner.

51. A filter assembly according to claim 50, wherein the bottom part comprises a bottom rim, and wherein the hook-shaped projections overlap the bottom rim of the bottom part to releasably attach thereto, and wherein the spring levers rotate on pivot points, and wherein the spring levers comprise upwardly projecting actuation flaps.

52. A filter assembly according to claim 50, further comprising an annular seal between the cover and the bottom part, wherein the cover comprises an annular channel and a free annular space, and wherein the bottom part comprises an annular projection engaging the free annular space, wherein the annular seal is disposed in the annular channel.

53. A filter assembly according to claim 50, wherein the means for supporting the filter media comprises a disk-shaped supporting body for the filter media sheet disposed in a recess of the bottom part, and wherein the recess comprises supporting ribs surrounding the outlet.

54. A filter assembly according to claim 50 wherein the means for supporting the filter media comprises a plurality of ribs.

55. A filter assembly according to claim 50, wherein the filter media sheet comprises a lateral tongue extending from the closed housing.

56. A filter assembly according to claim 55, wherein the cover and the bottom part each comprises a recess for the passage of the tongue of the filter media sheet.

57. A filter assembly according to claim 51, wherein the means for supporting the filter media comprises a disk-shaped supporting body for the filter media sheet disposed in a recess of the bottom part, and wherein the recess comprises supporting ribs surrounding the outlet.

58. A filter assembly according to claim 51 wherein the means for supporting the filter media comprises a plurality of ribs.

59. A filter assembly according to claim 52, wherein the means for supporting the filter media comprises a disk-shaped supporting body for the filter media sheet disposed in a recess of the bottom part, and wherein the recess comprises supporting ribs surrounding the outlet.

60. A filter assembly according to claim 52 wherein the means for supporting the filter media comprises a plurality of ribs.